GPC41 Commercial/GPM41 Medical

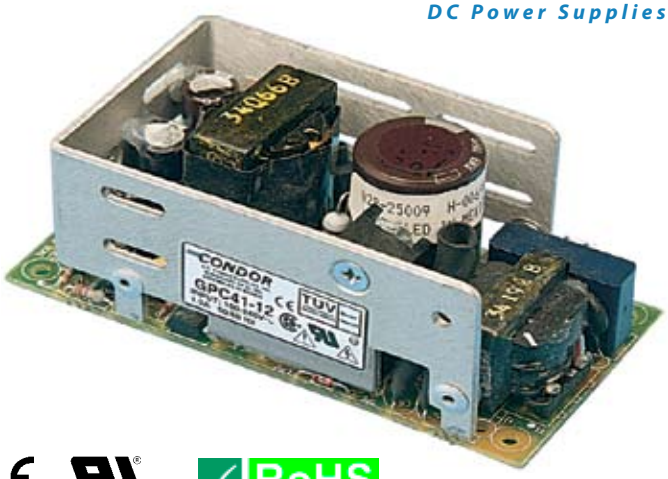
41 WATT GLOBAL PERFORMANCE SWITCHERS

GLOBAL PERFORMANCE SWITCHERS

CONDOR DC Power Supplies

Summary:

- **Ultra small (2.00" x 4.00" x 1.50")**
- **Wide-range ac input 85-264 Vac**
- **2-year warranty**
- **Conducted EMI exceeds FCC Class B and CISPR 22 Class B (Commercial models) and CISPR 11 Class B (Medical models)**
- **Commercial Approved to UL1950, IEC950, EN60950 and CSA22.2-234 L3**
- **Medical Approved to UL2601-1, IEC601-1 and CSA22.2 No. 601**
- **RoHS Compliant (G suffix)**
- **CE marked to LVD**



SPECIFICATIONS

Ac Input
85-264 Vac, 47-63 Hz single phase.

Input Current
Maximum input current at 120 Vac, 60 Hz with full rated output load: 1.3 A

Hold-Up Time
20 ms minimum from loss of ac input at full load, nominal line (115 Vac).

Output Power
40 W continuous, 50 W peak. Peak ratings are for 60 s maximum duration, 10% duty cycle. During peak load condition, output regulation may exceed total regulation limits.

Overload Protection
Fully protected against short circuit and output overload.
Short circuit protection is cycling type power limit.
Recovery after fault is automatic. Factory set to begin power limiting at approximately 55 W. See output ratings chart for additional notes or conditions.

Overvoltage Protection.
See output ratings chart.

Efficiency
69-77% at full rated load, nominal input voltage, depending on model.

Turn-on Time
Less than 1 s at 120 Vac, 25°C (inversely proportional to input voltage).

Input Protection
Requires external ac line fusing. A 2.5 A, 250 V rated fuse with I2t > 20 is recommended.

Inrush Current
Inrush is limited by internal thermistor. Inrush at 240 Vac under cold start conditions will not exceed 34 A.

Temperature Coefficient
0.03%/°C typical on all outputs.

Environmental
Designed for 0 to 50°C operation at full rated output power; derate output current and total output power by 2.5% per °C above 50°C. See Environmental and Packaging Specifications on next page.

Output Noise
0.5% rms, 1% pk-pk, 20 MHz bandwidth, differential mode. Measured with noise probe directly across output terminals of the power supply.

Transient Response
Main output—500 µs typical response time for return to within 0.5% of final value for a 50% load step change. Δi/ Δt<0.2 A/µs. Maximum voltage deviation is 3.5%. Startup/ shutdown overshoot less than 3%.

EMI/EMC Compliance
All models include built-in EMI filtering to meet the following emissions requirements:

EMI SPECIFICATIONS	COMPLIANCE LEVEL
Conducted Emissions GPC41	EN55022 Class B; FCC Class B
Conducted Emissions GPM41	EN55011 Class B; FCC Class B
Static Discharge	EN61000-4-2, 6 kV contact, 8 kV air
RF Field Susceptibility	EN61000-4-3, 3 V/meter
Fast Transients/Bursts	EN61000-4-4, 2 kV, 5 kH
Surge Susceptibility	EN61000-4-5, 1 kV diff., 2 kV com.

Commercial Leakage Current
60 µA single fault; 60 Hz input.

Commercial Safety
Approved to UL1950, CSA22.2 No. 234 Level 3, IEC950 and EN60950. UL file #E135803 commercial; CSA #LR46516 all models. All dc outputs are SELV under normal and single fault conditions.

Medical Leakage Current
35 µA , 254 Vac 60 Hz input.

Medical Safety
Approved to UL2601, CSA22.2 No. 601 Level 3, IEC601.
UL file E116994; CSA #LR46516. The output(s) are intended for safety earthed Signal Output and Intermediate Circuits only. The output(s) are not acceptable for patient connection without additional isolation. All dc outputs are SELV under normal and single fault conditions.

All specifications are typical at nominal input, full load at 25°C unless otherwise stated

Commercial Model	Medical Model	Output	Current	Minimum Load	Load Regulation	Initial Setpoint Tolerance	OVP Setpoint	Ripple and Noise
GPC41-5	GPM41-5	5.1 V	6.0 A	0.15	0.75%	2%	6.2 ± 0.6 V	1%
GPC41-12	GPM41-12	12 V	3.3 A	0.03	0.75%	2%	14 ± 1.0 V	1%
GPC41-15	GPM41-15	15 V	2.7 A	0.03	0.75%	2%	19 ± 1.5 V	1%
GPC41-24	GPM41-24	24 V	1.7 A	0.01	0.75%	2%	28± 2.5 V	1%
GPC41-28		28 V	1.4 A	0.01	0.75%	2%	34 ± 2.8 V	1%

Note: Add "G" suffix to model number for RoHS compliant model.

GPC41/GPM41 MECHANICAL SPECIFICATIONS

INPUT J1: AMP P/N 640445-2, 0.156 CTR
SQUARE PIN HEADER

PIN 1) AC LINE
PIN 3) AC NEUTRAL

⏚ 0.098 THRU HOLE

OUTPUT J2: AMP P/N 640445-4, 0.156 CTR
SQUARE PIN HEADER

PIN 1) OUTPUT #1
PIN 2) OUTPUT #1
PIN 3) COMMON
PIN 4) COMMON

MATING CONNECTORS: AMP P/N

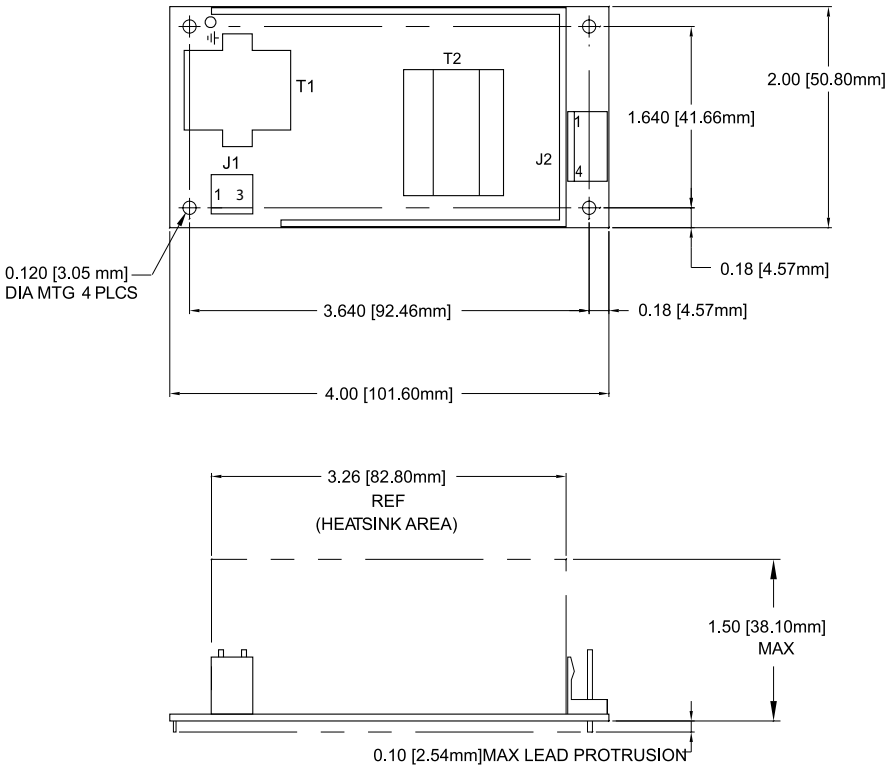
	HOUSING	CONTACT
INPUT	640250-2	770476-1
OUTPUT	640250-4	770476-1

NOTE: 5A MAXIMUM RECOMMENDED CURRENT PER CONNECTOR PIN

OPTION: COVER ASSEMBLY (P/N 08-30466-1041)

WEIGHT: 7.0 OZ. (0.199 kg)

TOLERANCES:
X.XX =± 0.030 (0.76MM)
X.XXX =± 0.010 (0.25MM)



ENVIRONMENTAL SPECIFICATIONS	OPERATING	NON-OPERATING
Temperature (A)	See individual specs.	-40 to +85°C
Humidity (A)	0 to 95% RH	0 to 95% RH
Shock (B)	20 g_{pk}	40 g_{pk}
Altitude	-500 to 10,000 ft	-500 to 40,000 ft
Vibration (C)	1.5 g_{rms}, 0.003 g^2/Hz	5 g_{rms}, 0.026 g^2/Hz

A. Units should be allowed to warm up/operate under non-condensing conditions before application of power. Derate output current and total output power by 2.5% per °C above 50°C. For operation in a confined space, moving air may be required. Under all conditions, the cooling vs. load profile should be such that heat sinks and/or heatsink temperatures do not exceed 90 °C for extended periods.

B. Shock testing—half-sinusoidal, 10 ± 3 ms duration, ± direction, 3 orthogonal axes, total 6 shocks.

C. Random vibration—10 to 2000Hz, 6dB/octave roll-off from 350 to 2000Hz, 3 orthogonal axes. Tested for 10 min./axis operating and 1 hr./axis non-operating.

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